

362226079410102 RK-244 DENR Upper Piedmont Research Station MW-S4I (Transition zone well)—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2003 to October 2004 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 2003 to October 2004.

pH: May 2003 to October 2004.

WATER TEMPERATURE: May 2003 to October 2004.

DISSOLVED OXYGEN: May 2003 to October 2004.

DISSOLVED OXYGEN, PERCENT SATURATION: May 2003 to October 2004.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from May 2003 to October 2004.

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources, Water Resources Division as part of the Piedmont/Mountains ground-water study. Dissolved oxygen, percent saturation, is computed using a barometric pressure of 750 mm Hg.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	315, March 6, 7, 8, 25, 2004, July 28-31, 2004	289, July 17, 18, 2003
pH, standard units	7.7, May 27, 2004	6.8, June 19, 20, 21, 2003
WATER TEMPERATURE, °C	14.6, on several days during the period	13.5, on many days during the period
DISSOLVED OXYGEN, mg/L	0.9, August 9, 10, 14, 2003	0.0, on many days during the period
DISSOLVED OXYGEN, PERCENT SATURATION, %	9, August 9, 10, 14, 2003	0, on many days during the period

EXTREMES FOR CURRENT PERIOD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	315, March 6, 7, 8, 25, July 28-31	292, November 10, 11
pH, standard units	7.7, May 27	7.2, on many days during the period
WATER TEMPERATURE, °C	14.6, on several days during the period	13.5, on many days during the period
DISSOLVED OXYGEN, mg/L	0.3, on several days during the period	0.0, on many days during the period
DISSOLVED OXYGEN, PERCENT SATURATION, %	3, on several days during the period	0, on many days during the period

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Bromide water, fltrd, mg/L (71870)	Chlor- ide, water, fltrd, mg/L (00940)
MAR 24...	1020	M	6.9	304	14.7	130	32.4	11.5	2.07	9.24	73	.10	14.7
Date		Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	
MAR 24...		32.2	51.0	208	<.04	<.06	<.008	<.006	<2	<7.0	829	156	

Remark codes used in this table:
 < -- Less than
 M-- Presence verified, not quantified

362226079410102 RK-244 DENR Upper Piedmont Research Station MW-S4I (Transition zone well)—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	296	295	300	310	313	306	307	310	312	313	303
2	299	296	295	300	310	314	306	307	310	312	312	303
3	299	296	---	300	311	314	306	308	310	312	311	303
4	299	295	---	301	311	314	305	308	311	312	310	303
5	298	295	---	301	311	314	305	307	311	312	310	303
6	298	295	296	301	311	314	305	307	311	312	309	302
7	299	294	296	301	311	314	305	307	311	312	309	302
8	299	293	296	302	311	314	305	308	311	312	308	302
9	299	293	---	302	311	313	304	308	312	313	308	303
10	299	293	---	302	311	313	304	308	312	313	308	302
11	298	293	---	303	311	312	304	309	312	313	307	302
12	298	293	---	303	312	313	305	309	312	313	307	302
13	298	293	---	303	312	313	305	309	312	313	307	302
14	298	293	---	304	312	313	305	308	312	313	307	301
15	298	293	---	304	312	313	305	309	312	313	307	300
16	298	293	---	304	312	313	305	309	312	312	307	300
17	297	294	---	305	312	313	305	309	312	311	306	300
18	297	294	---	305	312	313	304	309	312	312	306	300
19	297	294	297	305	312	313	304	309	311	312	305	300
20	297	294	297	306	312	313	305	310	310	312	304	300
21	297	294	297	306	312	314	305	310	310	313	304	300
22	297	294	297	307	312	313	305	310	310	313	304	301
23	296	294	297	307	312	313	305	309	310	313	304	301
24	296	295	298	307	313	---	306	309	311	313	304	301
25	297	295	298	308	313	314	306	309	311	313	304	300
26	297	295	298	308	313	313	305	309	311	313	303	300
27	297	295	298	309	313	312	305	310	311	313	303	300
28	297	295	299	309	313	311	306	309	311	---	303	300
29	296	295	299	309	313	310	306	309	311	315	303	300
30	296	295	299	310	---	309	307	309	312	315	303	300
31	296	---	299	310	---	307	---	309	---	314	303	---
MEAN	298	294	---	305	312	---	305	309	311	---	306	301
MAX	299	296	--	310	313	--	307	310	312	--	313	303
MIN	296	293	--	300	310	--	304	307	310	--	303	300

362226079410102 RK-244 DENR Upper Piedmont Research Station MW-S4I (Transition zone well)—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	7.3	7.4	7.5	7.5	7.4	7.4	7.5	7.5	7.5	7.3	7.4
2	7.3	7.2	7.4	7.5	7.5	7.4	7.4	7.5	7.5	7.5	7.3	7.4
3	7.3	7.2	---	7.5	7.5	7.4	7.3	7.5	7.5	7.5	7.4	7.4
4	7.3	7.2	---	7.5	7.5	7.4	7.3	7.5	7.5	7.5	7.4	7.4
5	7.3	7.2	---	7.5	7.5	7.4	7.4	7.5	7.5	7.5	7.4	7.4
6	7.3	7.2	7.4	7.5	7.5	7.4	7.4	7.5	7.5	7.5	7.4	7.4
7	7.3	7.2	7.4	7.5	7.5	7.4	7.4	7.5	7.5	7.5	7.4	7.4
8	7.2	7.2	7.4	7.5	7.5	7.4	7.4	7.5	7.5	7.5	7.4	7.4
9	7.2	7.2	---	7.5	7.5	7.4	7.4	7.5	7.5	7.4	7.4	7.4
10	7.2	7.2	---	7.5	7.5	7.4	7.4	7.5	7.6	7.4	7.4	7.4
11	7.2	7.2	---	7.5	7.5	7.4	7.4	7.5	7.6	7.4	7.4	7.4
12	7.2	7.2	---	7.5	7.5	7.4	7.4	7.5	7.5	7.4	7.4	7.3
13	7.2	7.3	---	7.5	7.5	7.4	7.4	7.5	7.5	7.4	7.4	7.3
14	7.3	7.3	---	7.6	7.5	7.4	7.4	7.5	7.5	7.4	7.4	7.3
15	7.3	7.3	---	7.6	7.5	7.4	7.4	7.5	7.5	7.4	7.5	7.3
16	7.3	7.3	---	7.6	7.5	7.4	7.4	7.5	7.5	---	7.5	7.3
17	7.3	7.3	---	7.6	7.5	7.4	7.4	7.5	7.5	---	7.4	7.3
18	7.3	7.3	---	7.6	7.5	7.4	7.4	7.5	---	7.5	7.4	7.3
19	7.3	7.3	7.5	7.6	7.5	7.4	7.4	7.5	---	7.5	7.4	7.3
20	7.3	7.4	7.5	7.6	7.5	7.4	7.4	7.5	---	7.5	7.4	7.3
21	7.3	7.4	7.5	7.6	7.5	7.4	7.4	7.5	7.5	7.5	7.4	7.3
22	7.3	7.4	7.5	7.6	7.4	7.4	7.4	7.5	7.5	7.5	7.4	7.3
23	7.3	7.4	7.5	7.6	7.4	7.4	7.4	7.4	7.5	7.5	7.4	7.3
24	7.3	7.4	7.5	7.6	7.4	---	7.4	7.4	7.5	7.5	7.4	7.3
25	7.3	7.4	7.5	7.6	7.4	7.3	7.4	7.4	7.5	7.5	7.4	7.3
26	7.3	7.4	7.5	7.6	7.4	7.3	7.4	7.5	7.5	7.5	7.4	7.3
27	7.3	7.4	7.6	7.5	7.4	7.4	7.4	---	7.5	7.5	7.4	7.3
28	7.3	7.4	7.6	7.5	7.4	7.4	7.5	---	7.5	---	7.4	7.3
29	7.3	7.4	7.6	7.5	7.4	7.4	7.5	7.5	7.5	7.3	7.4	7.3
30	7.3	7.4	7.6	7.5	---	7.4	7.5	7.5	7.5	7.3	7.4	7.3
31	7.3	---	7.6	7.5	---	7.4	---	7.5	---	7.3	7.4	---
MEAN	7.3	7.3	---	7.5	7.5	---	7.4	---	---	---	7.4	7.3
MAX	7.3	7.4	---	7.6	7.5	---	7.5	---	---	---	7.5	7.4
MIN	7.2	7.2	---	7.5	7.4	---	7.3	---	---	---	7.3	7.3

362226079410102 RK-244 DENR Upper Piedmont Research Station MW-S4I (Transition zone well)—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.2	14.4	14.6	14.4	14.1	13.7	13.6	13.6	13.7	13.8	13.9	14.0
2	14.2	14.4	14.6	14.4	14.1	13.7	13.6	13.6	13.7	13.8	13.9	14.1
3	14.2	14.4	---	14.4	14.1	13.7	13.6	13.6	13.7	13.8	13.9	14.1
4	14.2	14.4	---	14.4	14.0	13.7	13.6	13.6	13.7	13.8	13.9	14.1
5	14.3	14.4	---	14.4	14.0	13.7	13.6	13.6	13.7	13.8	13.9	14.1
6	14.3	14.4	14.6	14.4	14.0	13.7	13.6	13.6	13.7	13.8	13.9	14.1
7	14.3	14.5	14.6	14.4	13.8	13.7	13.6	13.6	13.7	13.8	13.9	14.1
8	14.3	14.5	14.6	14.3	13.9	13.7	13.6	13.6	13.7	13.8	13.9	14.1
9	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	13.9	14.1
10	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	14.0	14.1
11	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	14.0	14.1
12	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	14.0	14.1
13	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	14.0	14.1
14	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	14.0	---
15	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	14.0	14.1
16	14.3	14.5	---	14.3	13.9	13.7	13.6	13.6	13.7	13.8	14.0	14.1
17	14.3	14.5	---	14.3	13.8	13.7	13.6	13.6	13.7	13.9	14.0	14.1
18	14.3	14.5	---	14.3	13.8	13.7	13.6	13.6	13.8	13.9	14.0	14.1
19	14.3	14.5	14.4	14.3	13.8	13.7	13.6	13.6	13.8	13.9	14.0	14.1
20	14.3	14.5	14.4	14.3	13.8	13.7	13.6	13.6	13.8	13.9	14.0	14.1
21	14.4	14.6	14.4	14.2	13.8	13.7	13.6	13.6	13.8	13.9	14.0	14.1
22	14.4	14.6	14.4	14.2	13.8	13.7	13.6	13.6	13.8	13.9	14.0	14.1
23	14.4	14.6	14.4	14.2	13.8	13.7	13.6	13.6	13.8	13.9	14.0	14.2
24	14.4	14.6	14.4	14.2	13.7	---	13.6	13.7	13.8	13.9	14.0	14.2
25	14.4	14.6	14.4	14.2	13.7	13.7	13.6	13.7	13.8	13.9	14.0	14.2
26	14.4	14.6	14.4	14.2	13.7	13.7	13.6	13.7	13.8	13.9	14.0	14.2
27	14.4	14.6	14.4	14.2	13.7	13.6	13.6	13.7	13.8	13.9	14.0	14.2
28	14.4	14.6	14.4	14.2	13.7	13.6	13.6	13.7	13.8	---	14.0	14.2
29	14.4	14.6	14.4	14.2	13.7	13.6	13.6	13.7	13.8	13.9	14.0	14.2
30	14.4	14.6	14.4	14.2	---	13.6	13.6	13.7	13.8	13.9	14.0	14.2
31	14.4	---	14.4	14.1	---	13.6	---	13.7	---	13.9	14.0	---
MEAN	14.3	14.5	---	14.3	13.9	---	13.6	13.6	13.7	---	14.0	---
MAX	14.4	14.6	---	14.4	14.1	---	13.6	13.7	13.8	---	14.0	---
MIN	14.2	14.4	---	14.1	13.7	---	13.6	13.6	13.7	---	13.9	---

362226079410102 RK-244 DENR Upper Piedmont Research Station MW-S4I (Transition zone well)—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
3	0.2	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
4	0.2	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
5	0.2	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
6	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
7	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
8	0.2	0.2	0.1	0.1	0.1	---	0.1	0.1	0.1	0.1	0.1	0.0
9	0.2	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
10	0.2	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
11	0.2	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
12	0.2	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
13	0.1	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
14	0.1	0.1	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	---
15	0.1	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	---
16	0.1	0.2	---	0.1	0.1	0.1	0.1	0.1	0.1	---	0.1	---
17	0.2	0.1	---	0.1	0.1	0.1	0.1	0.1	0.1	---	0.0	0.1
18	0.2	0.1	---	0.1	0.1	0.1	0.1	0.1	---	---	0.1	0.1
19	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	---	0.1	0.0	0.1
20	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	---	0.1	0.0	0.1
21	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
22	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
23	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
24	0.2	0.1	0.1	0.1	0.1	---	0.1	0.1	0.1	0.1	0.0	0.1
25	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
26	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
27	0.2	0.1	0.1	0.1	0.1	0.1	0.1	---	0.1	0.1	0.0	0.1
28	0.2	0.1	0.1	0.1	0.1	0.1	0.1	---	0.1	---	0.0	0.1
29	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	---	0.0	0.1
30	0.2	0.1	0.1	0.1	---	0.1	0.1	0.1	0.1	---	0.0	0.1
31	0.2	---	0.1	0.1	---	0.1	---	0.1	---	---	0.0	---
MEAN	0.2	---	---	0.1	0.1	---	0.1	---	---	---	0.1	---
MAX	0.2	---	---	0.1	0.1	---	0.1	---	---	---	0.1	---
MIN	0.1	---	---	0.1	0.1	---	0.1	---	---	---	0.0	---

362226079410102 RK-244 DENR Upper Piedmont Research Station MW-S4I (Transition zone well)—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2	2	1	1	1	1	1	1	1	1	1	0
2	2	2	1	1	1	1	1	1	1	1	1	0
3	2	2	---	1	1	1	1	1	1	1	1	0
4	2	2	---	1	1	1	1	1	1	1	0	0
5	2	2	---	1	1	1	1	1	1	1	1	0
6	2	2	1	1	1	1	1	1	1	1	1	0
7	2	---	1	1	1	1	1	1	1	1	0	0
8	2	2	1	1	1	---	1	1	1	1	0	0
9	2	2	---	1	1	1	1	1	1	0	0	0
10	2	2	---	1	1	1	1	1	1	1	0	0
11	2	2	---	1	1	1	1	1	1	1	0	0
12	2	2	---	1	1	1	1	1	1	1	0	0
13	1	2	---	1	1	1	1	1	1	1	0	0
14	1	2	---	1	1	1	1	1	1	0	0	---
15	1	2	---	1	1	1	1	1	1	0	0	---
16	1	2	---	1	1	1	1	1	1	---	0	---
17	2	1	---	1	1	1	1	1	1	---	0	1
18	2	1	---	1	1	1	1	1	---	---	0	1
19	2	1	2	1	1	1	1	1	---	1	0	0
20	2	1	2	1	1	1	1	1	---	1	0	0
21	2	1	1	1	1	1	1	1	1	1	0	0
22	2	1	1	1	1	1	1	1	1	1	0	0
23	2	1	1	1	1	1	1	1	1	1	0	0
24	2	1	1	1	1	---	1	1	1	0	0	0
25	2	1	1	1	1	1	1	1	1	0	0	0
26	2	1	1	1	1	1	1	1	1	0	0	0
27	2	1	1	1	1	1	1	---	1	0	0	0
28	2	1	1	1	1	1	1	---	1	---	0	0
29	2	1	1	1	1	1	1	1	1	---	0	0
30	2	1	1	1	---	1	1	1	1	---	0	0
31	2	---	1	1	---	1	---	1	---	---	0	---
MEAN	2	---	---	1	1	---	1	---	---	---	0	---
MAX	2	--	--	1	1	--	1	--	--	--	1	--
MIN	1	--	--	1	1	--	1	--	--	--	0	--

